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09/839,608	04/23/2001	Pascal Ross	16325.005	1479

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Arnold & Porter
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Washington, DC 20004-1206

EXAMINER

CULLER, JILL E

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,608

Applicant(s)

ROSS ET AL.

Examiner

Jill E. Culler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to because Figs. 1 and 2 have titles which do not appear to be relevant to the current application. In Fig. 1, "NEW DOCTOR BLADE DESIGN", and in Fig. 2, "Aquaflex presses new configuration". Also, in Figs. 1 and 2, the reference numerals 2 and 5 do not clearly indicate their association with a particular part of the drawing and would be more effective with lead lines pointing to the relevant parts of the invention.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: On page 8, line 4, the word "flexographic" is misspelled "felxographic".

Appropriate correction is required.

Claim Objections

3. Claims 8 and 17 are objected to because of the following informalities: In claims 8 and 17, there is no indication which dimension of the gap is 0.020 to 0.125 inch. Since it appears that it should be the width, adding the words "in width" or similar language would better define the claimed structure. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 18-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 18, on line 6, it is unclear exactly which volume of ink is being referred to by the limitation "said ink". Although it appears that applicant may be referring to the "volume of excess ink" as recited in line 5, this has not been made sufficiently clear.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 4, 6-11, 13, 15-18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,826,509 to Deneka in view of U.S. Patent No. 3,333,535 to Behringer.

With respect to claims 1-2, Deneka teaches a doctor blade assembly, 30, for use in a flexographic printing system comprising an upper blade, 34, positioned to provide contact with an anilox roll, 20, an ink chamber, 47, 49, positioned below the upper blade, and a lower blade, 33.

Deneka does not teach that the lower blade is positioned such that a gap exists between the lower blade and the anilox roll sufficient in size to allow ink to be drawn into and expelled from the ink chamber, an ink tray positioned below the lower blade for receiving ink expelled from the gap or that the gap is positioned such that ink is consistently transferred to the roller.

Behringer shows a doctor blade assembly for use in a printing system comprising, an upper blade, 100, positioned to provide contact with a roller, 14, an ink chamber positioned below the upper blade, a lower blade, 58, positioned such that a gap exists between the lower blade and the roller sufficient in size to allow ink to be drawn into and expelled from the ink chamber, see column 5, lines 6-8, and an ink tray, 52, positioned below the lower blade for receiving ink expelled from the gap. Behringer also shows that the gap is positioned such that ink is consistently transferred to the roller.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the doctor blade assembly structure of Behringer with the printing system of Deneka in order to be able to more consistently transfer ink to the anilox roll.

With respect to claims 9-10, Deneka shows a system comprising an anilox roll, 20, coupled to an ink supply, a printing cylinder, 11, coupled to the anilox roll, 20, for transferring patterns to a web, 13, ink chamber means, 30, for consistently applying ink to the anilox roll and thereby to the printing cylinder and for maintaining consistent ink transfer from the ink chamber means to the anilox roll.

Deneka does not teach a gap means for increasing volume in the ink chamber means and for allowing ink to be expelled from the ink chamber means.

Behringer teaches an ink chamber means having a gap means for increasing volume in the ink chamber means and for allowing ink to be expelled from the ink chamber means. See column 5, lines 6-8.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the gap means of Behringer with the ink chamber means of Deneka in order to be able to more consistently transfer ink to the anilox roll.

With respect to claims 4 and 13, Deneka does not teach that the doctor blade assembly is retractable such that the upper blade provides sufficient contact for varying diameters of anilox roll.

Behringer teaches a doctor blade assembly that is retractable to accommodate varying diameters of the anilox roll, see column 5, lines 8-12.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the doctor blade assembly of Deneka using the retractable structure of Behringer in order to be able to supply ink to anilox rolls of varying sizes in the printing system.

With respect to claims 6 and 15, Deneka teaches that the upper blade is in contact with the anilox roller for the entire length of the roller. See column 4, lines 3-6.

With respect to claims 7 and 16, Deneka teaches that the lower blade is positioned to mirror the angle of the upper blade with the vertical.

With respect to claims 8 and 17, neither Deneka nor Behringer discusses the specific dimensions of the doctor blade assembly as claimed. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to construct the doctor blade assembly using appropriate dimensions to accommodate any printing system for which it was intended.

With respect to claim 11, Deneka teaches a means for maintaining consistent hydraulic pressure within the ink chamber means. See column 1, lines 49-53.

With respect to claim 18, Deneka teaches a method of metering the transfer of ink into anilox cells, comprising the steps of rotating an anilox roll, 20, against an upper blade, 34, see column 3, lines 48-55, shaving a volume of excess ink from the surface of the anilox roll, see column 5, lines 20-21, directing the flow of ink into an ink chamber, 49, see column 5, lines 21-22, and transferring ink from the ink chamber to anilox cells under pressure, see column 5, lines 33-37.

Deneka does not teach the step of carrying ink on the anilox roll from an ink supply through a gap.

Behringer teaches a method of applying ink from an ink supply, 52, and carrying it through a gap into an ink chamber. See column 4, lines 58-63.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the ink transferring method of Deneka using the step of applying ink from an ink supply through a gap, as taught by Behringer, to introduce additional ink from the ink supply means into the ink chamber.

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With respect to claim 22, Deneka teaches consistently transferring ink from anilox cells to a means for transferring a pattern to a web. See column 3, lines 13-22.

8. Claims 3, 12 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deneka and Behringer as applied to claims 1-2, 4, 6-11, 13, 15-18 and 22 above, and further in view of U.S. Patent No. 5,168,806 to Reder et al.

With respect to claims 3, 12, 19 and 21, Deneka and Behringer teach all that is claimed, as in the above rejection of claims 1-2, 4, 6-11, 13, 15-18 and 22 except that the ink is consistently expelled from the ink chamber through the gap once a critical pressure has been reached inside the ink chamber.

Reder et al. teaches a doctor blade assembly having a gap between a doctor blade, 8, and an ink roller, 2, through which ink is consistently expelled from an ink chamber, 9, as pressure is increased in the ink chamber, see column 4, lines 56-61.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the ink chamber means of Deneka using the pressure sensitive gap means of Reder et al. in order to be able to expel the ink from the ink chamber through the gap.

With respect to claim 20, Deneka and Behringer do not teach the step of reusing the expelled ink in the performance of steps (a) through (e).

Reder et al. teaches that the expelled ink is collected and reused. See column 5, lines 5-9.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the ink chamber means of Deneka to reuse the expelled ink, as taught by Reder et al. in order to minimize the waste of the ink.

9. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deneka and Behringer as applied to claims 1-2, 4, 6-11, 13, 15-18 and 22 above, and further in view of U.S. Patent No. 4,432,282 to Jurinak.

Deneka and Behringer teach all that is claimed, as in the above rejection of claims 1-2, 4, 6-11, 13, 15-18 and 22 except that the upper blade is positioned at an angle ranging from 19 to 30 degrees from the vertical axis.

Jurinak teaches a doctor blade assembly with an upper blade, 44, positioned at an angle of about 30 degrees to the vertical axis. See column 6, line 67 to column 7, line 3.

It would have been obvious to one having ordinary skill in the art at the time of the invention to position the upper blade of Deneka, as modified by Behringer, at an angle ranging from 19 to 30 degrees from the vertical axis because Jurinak teaches that this is an advantageous angle at which to position the doctor blade.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 4,497,250 to Dressler and U.S. Patent No.

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4,625,643 to Davis each teach a doctor blade assembly having obvious similarities to the claimed subject matter.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill E. Culler whose telephone number is (703) 308-1413. The examiner can normally be reached on M-Th 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (703) 305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

jec
March 8, 2003



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